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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/535,118

05/16/2005

Karl Barth

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07/27/2007

SCHIFF HARDIN, LLP  
PATENT DEPARTMENT  
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CHICAGO, IL 60606-6473

EXAMINER

LEWIS, CHERYL RENEA

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/535,118	<b>Applicant(s)</b> BARTH, KARL	
	<b>Examiner</b> Cheryl Lewis	<b>Art Unit</b> 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/14/05</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 13-26 are presented for examination. Claims 1-12 were cancelled in the preliminary amendment received on May 16, 2005. The amendment received on May 16, 2005 also introduced new claims 13-26.

#### ***Claim Objections***

2. Claim 1 is objected to because of the following informalities:

Independent claim 1 recites the claim limitation "running into". This limitation refers to a step that can be processed and performed by a human, i.e. human capability. Therefore, the Examiner kindly requests that the applicant consider amending the claim language to clarify the suggested meaning of this claim limitation. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 13 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As follows:

Claim 13 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject. Claim 13 is directed to generating a second volume data set, modulated and coded parallel to an observation direction, running into a first

volume data set, and applying a volume rendering to the second volume data set. The claimed inventions, as a whole must accomplish a **practical application**. That is, it must produce a **“useful, concrete and tangible result.”** *State Street*, 149 F.3d at 1373, 47 USPQ2s at 1601-02. MPEP 2106. In each of these cases the **result** identifying, selecting, and processing the selected data object. The claimed limitations are an abstraction as they are not **useful, concrete, and tangible** they are not put in any tangible form and not useful because they are not presented in such a way as to produce and/or provide some result that is of utility that may exist in the specification however no specific use is provided for in the claimed invention. Thus the claims are non-statutory and stand rejected under 101 as not **producing a “useful, concrete and tangible result.”**

Although, the claim limitation does include a generating step to generate a second volume data set to the volume elements of a first volume data set that are depth-dependent, the claim fails to produce a useful, concrete, and tangible result. The claim does not include any claim limitations that would suggests a manipulation and a transformation in the volume data set that would produce a concrete and tangible result. According to the applicant's Specification, the Specification indicates a number of features of the invention that would ultimately produce tangible results including: a useful, concrete, and a transfer of data, scanning of data, an accumulator storage, etc.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 13-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Dufour (Patent No. 6,661,914 B2 filed November 20, 2001).

7. Regarding Claims 13, Dufour teaches a method of reconstruction of tridimensional scenes and corresponding reconstruction device and decoding system.

The method and associated system for reconstruction of tridimensional scenes and corresponding reconstruction device and decoding system as taught or suggested by Dufour includes:

generating a second volume data (col. 4, lines 1-7) set in which the volume elements (Abstract, lines 2-11) of the first volume data set are at least one depth-dependently (col. 4, lines 34-46) modulated and coded parallel (col. 3, lines 51-64) to a main observation direction running into the first volume data set (col. 4, lines 1-7 53-61); and applying a volume rendering to the second volume data set (col. 4, lines 1-7 53-61).

8. Regarding Claim 14, Dufour teaches utilizing a transfer function for activating a depth-dependent 3D representation (col. 4, lines 47-52).

9. Regarding Claim 15, Dufour teaches transfer function for the volume rendering form of a canted bar (col. 5, lines 1-30).

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10. Regarding Claim 16, the limitations of this claim has been noted in the rejection of claim 13 presented above. It is therefore rejected as set forth above.
11. Regarding Claim 17, Dufour teaches volume rendering with a navigation system (Abstract, lines 2-11).
12. Regarding Claim 18, Dufour teaches a computer input apparatus (col. 4, lines 63-64).
13. Regarding Claim 19, Dufour teaches a texture mapping (col. 5, lines 1-30).
14. Regarding Claims 20-22, the limitations of these claims have been noted in the rejections of claim 19 presented above. They are therefore rejected as set forth above.
15. Regarding Claims 23-26, the limitations of these claims have been noted in the rejections of claim 13 presented above. They are therefore rejected as set forth above.

#### **NAME OF CONTACT**

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Lewis whose telephone number is (571) 272-4113. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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(571) 273-4113 (Use this FAX #, only after approval by Examiner, for "INFORMAL" or "DRAFT" communication. Examiners may request that a formal paper/amendment be faxed directly to them on occasions.).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/ Technology Center (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cheryl Lewis/  
Patent Examiner, A.U. 2167  
July 20, 2007